

Magnetic rings RI20/ LI20



High rotational speed



High IP



Shock/vibration resistant



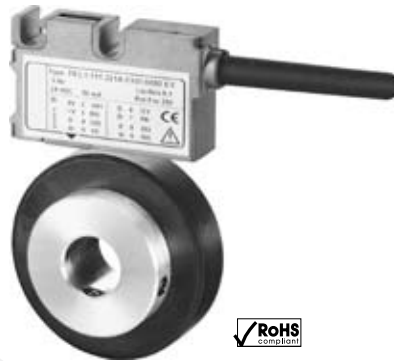
Reverse polarity protection

Robust

- **Increased ability to withstand vibrations and rough installation.** Eliminates machine downtime and repairs. High shock and vibration resistance, thanks to non-contact technology.
- **Stays sealed even when subjected to harsh everyday use. Offers security against failures in the field.** Potted housing with up to IP67 protection.

Compact

- Installation depth only 16 mm, width of magnetic ring 10 mm



- Large hollow shaft up to 30 mm
Can be used even where space is very tight

Simple installation

- **Fast start-up of the measuring system**
Easy fixing of the magnetic ring and the sensor head
- **Easy mounting with large tolerances possible**
Distance of sensor head to magnetic ring from 0.1-1.0 mm
- Tolerates lateral misalignment +1 mm
- Warning signal when magnetic field is too weak (LED)

Technical data magnetic sensor LI20:

Output circuit:	Push-Pull	RS422
Supply voltage:	4.8-30 VDC	4.8-26 VDC
Load/channel, max. cable length:	±20 mA, max. 30 m	120 Ohm, RS422 standard
Current consumption (without load):	typ. 25 mA, max. 60 mA	
Short-circuit proof outputs ¹⁾ :	yes	yes ²⁾
Min. Pulse interval:	1 µs (edge interval) corresp. to 4 µs/period (see signal figures at right)	
Output signal:	A, \bar{A} , B, \bar{B} , I, \bar{I}	
Reference signal:	Index periodical	
Accuracy:		
System accuracy:	typ. ±0.3° with shaft tolerance g6	
Repeat accuracy:	±1 increment	
Admissible alignment tolerance:	see draft "Mounting tolerances"	
Gap sensor / magnetic ring:	0.1-1.0 mm (recommended 0.4 mm)	
Offset:	max. ±1 mm	
Tilting:	max. 3°	
Torsion:	max. 3°	

Environmental conditions:

Working temperature:	-4 to +185°F (-20 to +80°C)
Shock resistance:	30 g (300 m/s ²), 10-2000 Hz
Protection class:	IP67 according to DIN 60 529 (housing)
Humidity:	100%, condensation possible
Housing:	Zinc die-cast

General data:

Cable:	2 m, PUR 8 x 0.14 mm ² , shielded, may be used in flexing cable installations
Status-LED:	Green: Pulse-index; Red: Error, revs too high or magnetic field too weak (for T8.LI20.XXXX.X020 and T8.LI20.XXXX.X050)
CE compliant acc. to:	EN 61 000-6-1, EN 61 000-6-4, EN 61 000-6-3, EN 61 000-4-8 (magnetic field)
RoHS compliant acc. to EU guideline 2002/95/EG	

¹⁾ With supply voltage correctly applied

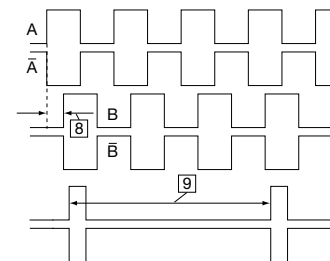
²⁾ A max. of one channel only may be short-circuited: (when +V = 5 V, a short-circuit to another channel, 0 V, or +V is permissible.) (when +V = 5-30 V, a short-circuit to another channel or to 0 V is permissible.)

Technical data magnetic ring RI20:

Pole gap:	2 mm from pole to pole
Temperature ranges:	Working temperature: -4 to +185°F (-20 to +80°C) Storage temperature: -4 to +185°F (-20 to +80°C)
Mounting:	Screwed on shaft typ. +0.3° (at 77°F (25°C)), Sensor/Magnetic ring distance 0.5 mm and drive shaft tolerance g6 in accordance with ISO 286-2
System accuracy:	

Signal figures

with rotation of the magnetic ring in the CW-direction (see draft "Mounting tolerances")



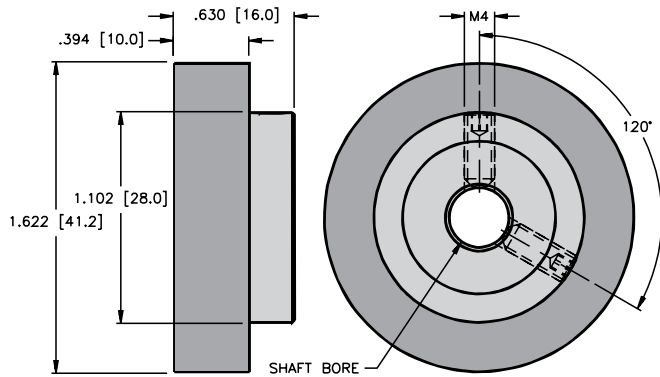
8 Min. Pulse interval: pay attention to the instructions in the technical data

9 periodic index signal (every 2mm) the logical assignment A, B and I-signal can change

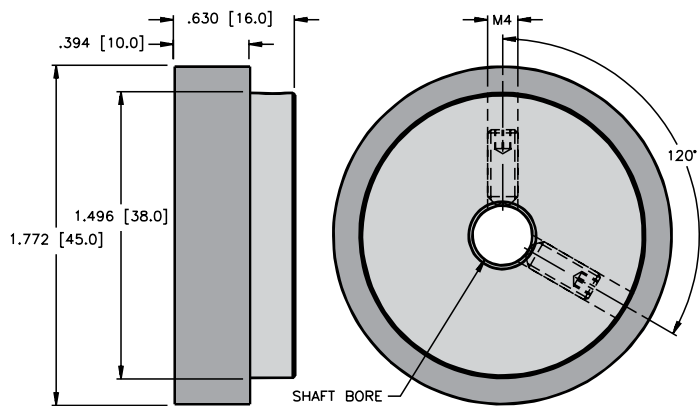
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Dimensions: RI20 magnetic ring

T8.RI20.041.XXXX.111, Ø 41.2 mm



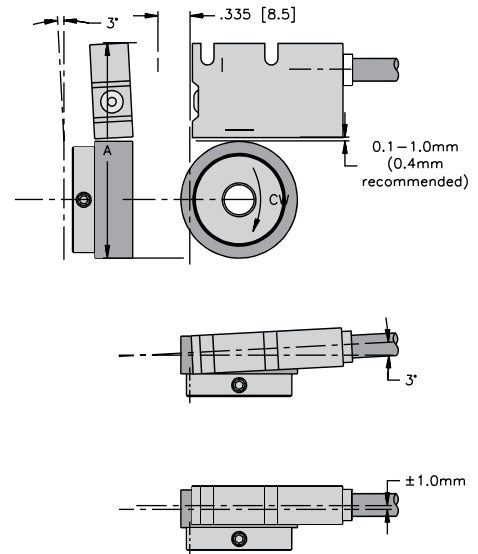
T8.RI20.045.XXXX.111, Ø 45 mm



Recommended tolerance of the drive shaft diameter: g6 in accordance with ISO 286-2

Permissible mounting tolerances:

RI20 and linear read head



Part Number	Dimension A
T8.RI20.031.XXXX.111	56.4 ¹⁾
T8.RI20.041.XXXX.111	66.6 ¹⁾
T8.RI20.051.XXXX.111	70.4 ¹⁾

¹⁾ With Distance Sensor / Magnetic ring = 0.4 mm

Display type 572 for LI20



Counter series for demanding applications, with two individually scalable encoder inputs. HTL or TTL in each case A, \bar{A} , B, \bar{B} for count frequencies up to 1 MHz per channel. Operating modes can be selected for position or event counter, total counter, difference counter, cut-to-length display, diameter calculator, batch counter and more.

- Two separate freely scalable count inputs - HTL or TTL; also with inverted inputs
- Max. input frequency 1 MHz/ channel
- Four freely programmable fast solid-state outputs, each with 350 mA output current
- Step or tracking preset
- AC and DC supply voltage
- Can be used as a counter or position display with limit values
- Monitoring function, where two values are monitored or calculated with respect to each other
- Four fast programmable inputs with various functions such as reset, gate, display memory, reference input or switching between the display values.
- Optional scalable analog output 0/4-20 mA, +/-10 V or 0-10 V

- Two auxiliary power supplies for sensors: 5.2 VDC and 24 VDC
- Standard interface RS232

Part number key specification:

Position display, 6 digits, with 4 fast switch outputs and serial interface: **6.572.0116.D05**

Position display, 6 digits, with 4 fast switch outputs and serial interface and scalable analog output: **6.572.0116.D95**

Position display, 8 digits, with 4 fast switch outputs and serial interface: **6.572.0118.D05**

Position display, 8 digits, with 4 fast switch outputs and serial interface and scalable analog output: **6.572.0118.D95**